

Date: Wed, 3 Nov 93 04:30:14 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #98
To: Ham-Ant

Ham-Ant Digest Wed, 3 Nov 93 Volume 93 : Issue 98

Today's Topics:

2m 5/8 wave to tall for garage
Archery Advice for Antenna Raising (2 msgs)
Broadcast AM antenna question
Chimney mounting a triband beam? (2 msgs)
Diamond X-500 Problem (2 msgs)
Feeding and matching Yagis
FM Broadcast Antenna? (2 msgs)
need 2m mobile ant. reccomendation
stubby HT antenna

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Nov 93 17:26:16 GMT
From: ogicse!emory!europa.eng.gtefsd.com!avdms8.msfc.nasa.gov!
geosim.msfc.nasa.gov!butler@network.ucsd.edu
Subject: 2m 5/8 wave to tall for garage
To: ham-ant@ucsd.edu

I am currently using a Larsen mag-mount 2 meter 5/8
antenna (which works great) but is too tall to fit
into my new garage. I have a mazda 323 2-door hatch-back
with a plastic bumper so cannot mount an antenna there.
I have tried a thru-the-window type 1/4 wave and was
very unhappy with the results. Any suggestions on
a good replacement antenna would be appreciated.
Thanks in advance.

73 de ad4jl

--

Karen A. Butler, New Technology Inc.

Date: 2 Nov 93 13:54:37 GMT
From: sdd.hp.com!col.hp.com!jms@hplabs.hp.com
Subject: Archery Advice for Antenna Raising
To: ham-ant@ucsd.edu

Bruce Cheney (brucece@tekgen.bv.tek.com) wrote:

: I am about to put some rope through the trees using an arrow
: with fish line attached to it. Anyone have any advice about
: bows, arrows, archery for this purpose, attaching fish line,
: paying the fish line out, etc ?

: If you do, I would appreciate hearing about it !!

: Bruce Cheney
: NI7M
: QTH: Sherwood, OR

I've done a lot of this during Field Day. My favorite setup is to use a 'fishing' arrow, with the wire barb removed. They are solid fiberglass and have enough weight to fall to the ground after reaching the apogee. Then I use 30 to 40 pound test line, whatever you can find. You don't really need a real strong bow. Mine is 40 lbs pull, but I usually only pull about half way, and we have some really tall pine trees here. I use an open face reel and a 2-piece rod, with only the base half used. After you shoot the arrow, you can watch for it to clear the top of the tree, and then, gently, stop the line with your hand, causing the arrow to drop directly down on the other side of the tree.

Mike, K0TER

Date: 2 Nov 93 05:50:13 GMT
From: ogicse!emory!europa.eng.gtefsd.com!darwin.sura.net!opuscl!not-for-mail@network.ucsd.edu
Subject: Archery Advice for Antenna Raising
To: ham-ant@ucsd.edu

I shot an arrow into the air
It fell to earth I know just where.
Although I aimed at a limb afar,
It pierced the radiator of my car.

73

David, AD4HM

Date: Tue, 2 Nov 1993 01:00:20 GMT
From: scrap.ssec.wisc.edu!orf@rsch.wisc.edu
Subject: Broadcast AM antenna question
To: ham-ant@ucsd.edu

I am posting this on behalf of Eric Gustafson (modular!eric@arizona.edu),
who is having network troubles at this time.

>To: deceglie@telenet.com
>In-Reply-To: deceglie@telenet.com's message of 28 Oct 93 19:30:03 GMT
>Subject: Broadcast AM antenna question

I would be addressing you by name but I couldn't decipher one from the
header information and there was no name reference in your message body.

There are a couple of options for you to consider. Absent any information
about the type of construction of your building, the first advice is to
locate whichever type antenna you end up using outdoors. SOME buildings
can give good results from indoors but much must be known about utility
routing, insulation type and backing (foil is a no-no) etc. to make the
decision to stay indoors rationally.

Is the helical coil on your stereo detachable for the purpose of using an
external AM antenna? Or is it the old style ferrite rod which is actually
the tuned circuit for the AM section input stage?

My stereo receiver (fairly recent design) uses a small open frame loop
(about 7 inch diameter) which attaches to the AM antenna terminals via a
twisted pair of wires. This loop is can be removed, located outdoors, and
connected via a longer twisted pair. Once a suitable remote location is
found, some experimentation with the orientation should be done to optimize
the desired station (or minimize an undesired one).

There are several companies which sell electrostatically shielded ferrite
loop antennas which are suitable for BC band use. Palomar Engineers is one
such company. These loops must be tuned to the desired channel (they have
a tuning knob). One of these can be located in a suitable outdoor location

(minimize coupling to local noise and interference sources) and connected via shielded cable to the stereo's AM antenna terminals. Again, some experimentation to discover the best orientation will be necessary.

Either option should improve your reception over what you currently have. One note of caution, If your receiver has a built in Ferrite Rod type antenna, steps will be required to eliminate coupling of signals into this antenna when using an external antenna. I have in the past been forced to replace the Ferrite Rod antenna with an adjustable shielded (both electrostatically and electromagnetically) coil of the same inductance. I found a suitable coil at Radio Shack but I had to do a little work to build a shielded enclosure for it. I am very glad that most of the newer high end stereos seem to be using the open frame detachable loops rather than the ferrite rods as this makes using an external antenna far easier to do properly.

I hope this is of some help.

73, Eric

```
-----
Eric Gustafson  N7CL          | The mountains are high and the Emperor
2018 S. Avenida Planeta      | is far away.
Tucson, AZ 85710            |
INTERNET: modular!eric@arizona.edu | You can't work 'em if you can't hear 'em.
-----
```

--

->?<-

"Here, the snow is grey. If I were an excitable guy, this would upset me to no end. Instead, I beat on cans. I beat the blues. Where's my angel? Where's my juice? Where's my angel? AAAAAAAAAUUUGH where's my

```
-----
Date: 2 Nov 93 22:29:31 GMT
From: sdd.hp.com!math.ohio-state.edu!cs.utexas.edu!not-for-mail@hplabs.hp.com
Subject: Chimney mounting a triband beam?
To: ham-ant@ucsd.edu
```

Hi,

I can get a good deal on the following package, used:
Mosley TA33 triband beam
Heavy duty rotor and controller
Create Design 6 ft quad roof tower
Thrust bearing

I'm not too keen about mounting the quad tower on my roof. I'll probably sell that. Has anyone mounted a tribander to a chimney, using a good mast and a heavy

duty strap type mount that one sees used on TV antennas with rotors? What kind of wind load does this puppy have?

The chimney is heavy stucco covered brick. It runs up the side of a 2 story colonial type house. The house is about 5 yrs old. QTH is outside Philadelphia. We don't get hurricanes, but winds can gust to 75 during heavy winter storms.

If this is doable, does anyone have a good source for high quality masts and mounts like this? (Not Radio Shack!)

If I'm crazy, let me know!

Thanks in advance.

Joe - N3PQY/AE
(landisj@drager.com)

Date: Wed, 3 Nov 1993 00:05:27 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!nuts2u.enet.dec.com!little@decwrl.dec.com
Subject: Chimney mounting a triband beam?
To: ham-ant@ucsd.edu

landisj@drager.com (Joe Landis - Systems/Network Mgr. - x2621) writes:

>I'm not too keen about mounting the quad tower on my roof. I'll probably sell
>that. Has anyone mounted a tribander to a chimney, using a good mast and a heavy
>duty strap type mount that one sees used on TV antennas with rotors? What kind
>of wind load does this puppy have?

The Radio Shack mast and mount is adequate if your intention is to knock your chimney over. :-}

Seriously, keep the quad tower and mount it **securely** to your roof. Chimneys are not made to withstand the overturning forces that an antenna produces. Chimneys mainly stay up due to their own weight pressing down on the bricks. Structurely they aren't worth a hoot. The cost of repairing your chimney the next time a hurricane kicks up 75 mph winds in your area is too great.

73,
Todd
N9MWB

Date: 2 Nov 1993 09:13:17 CST
From: ftpbox!mothost!schbbs!maccvm.corp.mot.com!CSLE87@uunet.uu.net
Subject: Diamond X-500 Problem
To: ham-ant@ucsd.edu

Jerry - This antenna, like most colinears, uses several stacks of coaxial line sections to build a phased vertical. Based on your symptoms (SWR about 4:1), you can assume that you now have an open connection between these stacked sections, giving you an odd number less sections than before. Losing an even number will drop the gain and shift the pattern slightly but has little effect on VSWR. This is usually caused by either mechanical fatigue from wind vibration or flexing, or electrical surges; lightning comes to mind immediately.

Keep the old feedline (check VSWR using 50 ohm load first) and replace the antenna! Also remember any amateur antenna that stays up and working wasn't big/high enough in the first place!

73 Work the WestPark Radiops Club Station W8VM in ARRL SS

----- Original Article -----

From: kd4cim@vulcan.com (Jerry Pruett - KD4CIM)

Newsgroups: rec.radio.amateur.antenna

Subject: Diamond X-500 Problem

Message-ID: <4L5Bcc2w165w@vulcan.com>

Date: Mon, 01 Nov 93 06:02:02 CST

Organization: Vulcan - Live Long and Prosper!

Lines: 19

I have been using a Diamond X-500 dual-bander for a couple of years and suddenly this week the SWR shot through the roof. The SWR would waver but remained about 4:1. All the symptoms of bad feedline (water?). Up we go with new feedline, new N-connectors - same problem.

After getting the antenna down, the high SWR was still there. Checking it over, I can't find any shorts or bad connection points. The problem is that I don't really understand the theory of this antenna (multiple co-linear - I think). Any hints as to what to check for would be appreciated (so I can get back on 440).

Thanks -

de Jerry

BHM AmprNet - kd4cim@kd4cim.ampr.org [44.100.113.19]

Packet Radio - KD4CIM @ KD4CIM.AL.USA.NA

Internet - kd4cim@vulcan.com

Date: 2 Nov 93 14:51:25 GMT
From: ncrgw2.ncr.com!ncrhub2!ncrlnk!ncrwc!donald!kthomps@uunet.uu.net
Subject: Diamond X-500 Problem
To: ham-ant@ucsd.edu

eric@terrapin.rose.hp.com (Eric Struble) writes:

)Jerry Pruet - KD4CIM (kd4cim@vulcan.com) wrote:

): I have been using a Diamond X-500 dual-bander for a couple of years
): and suddenly this week the SWR shot through the roof. The SWR would
): waver but remained about 4:1. All the symptoms of bad feedline
): (water?). Up we go with new feedline, new N-connectors - same

)Jerry,

)It's funny you should talk about a problem with your X-500. I too had
)a similar problem a couple of years ago. I installed my antenna up in the
)spring and it worked fine (no SWR) all summer. About December I started
)having a problem with high SWR. I too replaced the feed line but it didn't
)help. After I took the antenna down and disassembled it I found the
)problem. I have a 17' hose. The antenna had absorbed water and was soaking
)wet inside. I then got in contact w/ RF PARTS and talked to them about the
)problem I shipped it back to them where they checked it out for any damage
)to the components. They informed me that the gasket that is used to assemble
)the sections had gotten damaged in assembly and water had found its way in.

Dido, dido. All the X-500s must have this problem. The second time I found
the moisture I sent it in for them to check out. They drilled weep holes in the
base while they had it. All their other units have this feature. I had sealed
all my joints with teflon tape from Radio Shack and covered that with multiple
layers of electrical tape. The joints were clean and dry. I think the
fiberglass lets in the moisture. Seems ok so far with the drain holes in.

--

Ken Thompson N0ITL
Disk Array Hardware Development
Peripheral Products MPD-Wichita
NCR Corp. an AT&T company
3718 N. Rock Road Wichita, Ks 67226
(316) 636-8783
Ken.Thompson@wichitaks.ncr.com

Date: Sun, 31 Oct 1993 20:43:27 GMT
From: news.cerf.net!pagesat!olivea!spool.mu.edu!howland.reston.ans.net!
darwin.sura.net!perot.mtsu.edu!raider!theporch!jackatak!root@network.ucsd.edu
Subject: Feeding and matching Yagis
To: ham-ant@ucsd.edu

jayk@fc.hp.com (Jay Kesterson K0GU) writes:

> Tom Randolph (randolph@est.enet.dec.com) wrote:

> : I was planning a hairpin match, but I'd need some

Now for another \$0.02...

However, by using a one-liter or two-liter bottle from a soft drink (or designer water) as a coil form, the turns can be separated properly, the coil will hold its shape *and* effectiveness, *AND* you have recycled another non-degradable object that can now be useful choking RF instead of a landfill... Hell, you can even epoxy the cap to the center-feed so the bottle can be screwed in and supported! ;^)

```
+-----+
| Jack GF Hill          |Voice: (615) 459-2636 -           Ham Call: W4PPT |
| P. O. Box 1685        |Modem: (615) 377-5980 -   Bicycling and SCUBA Diving |
| Brentwood, TN 37024  |Fax:   (615) 459-0038 -           Life Member - ARRL |
| root@jackatak.raider.net - "Plus ca changer, plus c'est la meme chose" |
+-----+
```

SCOTT J GILBERT (STU_SJGILBER@VAX1.ACS.JMU.EDU) wrote:
: Can anyone give me a formula for length and/or specs of an FM broadcast
: antenna? Is the quarter-wave equation an accurate one to use to determine
: length of a vertical radiating element?

```
: Scott
: "If this question just don't fit this category, please go easy with those
```


: flamethrowers..."

half wave = 468 / 2
quarter is half of that.

Date: Tue, 2 Nov 1993 03:37:27 GMT
From: elroy.jpl.nasa.gov!sdd.hp.com!caen!malgudi.oar.net!news.ysu.edu!
hub.cs.jmu.edu!newsusr@ames.arpa
Subject: FM Broadcast Antenna?
To: ham-ant@ucsd.edu

Can anyone give me a formula for length and/or specs of an FM broadcast antenna? Is the quarter-wave equation an accurate one to use to determine length of a vertical radiating element?

Many thanks...

Scott

"If this question just don't fit this category, please go easy with those flamethrowers..."

Date: 1 Nov 1993 16:32 CST
From: dog.ee.lbl.gov!agate!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!
math.ohio-state.edu!usc!elroy.jpl.nasa.gov!swrinde!dptspd!TAMUTS.TAMU.EDU!
zeus.tamu.edu!tskloss@network.ucsd.edu
Subject: need 2m mobile ant. reccomendation
To: ham-ant@ucsd.edu

I think I'll go with a MFJ 5/8 unless another brand works considerably better. Any advice would be appreciated!

-tim

```
/-----\
|* *( * ( ** ) ( * * ) * * ) * |          Tim Skloss    KC5DNA      | | | | |
|* *  \ /  \ /  *  * |      Texas A&M University, Dept. of Chemistry |
|*   /=====\  * |          College Station, TX 77843-3255      |
|*   | OXFORD   |   |          LABORATORY FOR MAGNETIC RESONANCE    |
|   |  mags.   | * |          AND MOLECULAR SCIENCE                |
|*   |  RULE!  |   |          voice: (409) 845-4459                 |
|   |_____|   |   |          fax:   (409) 845-4719                  |
|   ||      ||   |          Internet: TSKLOSS@venus.tamu.edu        |
|   ==      ==   |      My opinions do not reflect those of TAMU!   |
\-----/
```

"The brain is much like a computer;
therefore dumb people do not exist, just people running DOS!"
PowerPC - The ULTIMATE personal computing machine.

Date: 1 Nov 1993 16:28 CST
From: dog.ee.lbl.gov!agate!spool.mu.edu!uwm.edu!math.ohio-state.edu!usc!
elroy.jpl.nasa.gov!swrinde!dptspd!TAMUTS.TAMU.EDU!zeus.tamu.edu!
tskloss@network.ucsd.edu
Subject: stubby HT antenna
To: ham-ant@ucsd.edu

In article <CFsGD9.KuK@news.iastate.edu>, bwehr@iastate.edu (Brant D Wehr)
writes...
>I seen an ad for a stubby HT antenna (Dual band). It was a comet CH-32 I
>would like to know any opinions. Also I would like to make a short stubby for
>my HT (dual band). If any one has any suggestions E-Mail me. thanks.

Hey, a 5 watt carbon 50 ohm resistior to ground works better than that
stubby, and it's cheaper!

tim

```

/-----\
|* *( * ( ** ) ( * * ) * * ) * |          Tim Skloss    KC5DNA      | | | | |
|* *  \ /  \ /  *  * |      Texas A&M University, Dept. of Chemistry |
|*   /===== \  * |          College Station, TX 77843-3255      |
|*   | OXFORD   |   |          LABORATORY FOR MAGNETIC RESONANCE    |
|   |  mags.   | * |          AND MOLECULAR SCIENCE                |
|*   |  RULE!  |   |          voice: (409) 845-4459                 |
|   |_____|   |   |          fax:   (409) 845-4719                  |
|   ||       ||   |          Internet: TSKLOSS@venus.tamu.edu       |
|   ==      ==   |      My opinions do not reflect those of TAMU!  |
\-----/

```

"The brain is much like a computer;
therefore dumb people do not exist, just people running DOS!"
PowerPC - The ULTIMATE personal computing machine.

Date: 2 Nov 93 16:37:34 GMT
From: ogicse!news.tek.com!gazette!usenet@network.ucsd.edu
To: ham-ant@ucsd.edu

References <2156@telenet.telenet.com>,
<1993Oct29.164405.21623@newsgate.sps.mot.com>, <1993Nov2.010020.643@cs.wisc.edu>
Subject : Re: Broadcast AM antenna question

Some years ago I had good success coupling a hula-hoop (yes!) wound with a couple of turns of #18 wire, and resonated with a broadcast capacitor, to the ferrite rod antenna on my cheap AM receiver.

The loop antenna exhibits a very high Q, plus has a reasonable null in the plane of the loop. I was surprised how far away from the loop I could be and still receive a greatly enhanced signal. A foot away from the loop produced good results.

I was using one of the classic \$5 transistor radios, which made for easy experimenting. I used the tuning cap out of another junked broadcast radio to tune the loop. I don't recall the exact number of turns on the loop, but it was less than five. I probably used a GDO to determine resonance.

I also found that link coupling was effective between the loop and the ferrite in the receiver. Though I didn't pursue it, the link and receiver could be shielded so only signals coupled magnetically would be picked up by the receiver. The links were a couple of turns of hookup wire, about 2" in diameter, connected with twisted hookup wire. The connecting wire (twisted) could be many feet long. I contemplated mounting the loop in the attic, with a broom pole rotator axle dropping through the ceiling of a closet.

End of Ham-Ant Digest V93 #98

